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PREVALENCE OF PREMILITARY ADULT SEXUAL VICTIMIZATION AND AGGRESSION IN A NAVY BASIC TRAINEE SAMPLE

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**Prevalence of Premilitary Adult Sexual Victimization and Aggression
in a Navy Basic Trainee Sample**

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SUMMARY

Problem. Navy basic trainees may enter military service with histories of being victims and perpetrators of sexual assault. Victims of sexual assault often have recurrent identifiable negative somatic and psychological symptomatology that appears to have its etiology in past traumatic sexual experiences. Perpetrators of sexual assault are at risk of repeating their behavior. Overall, sexual assault experiences have a detrimental impact on general health, behavior, and interpersonal relations, which may affect job performance, attrition, and naval readiness. Base-rates for sexual assault experiences of U.S. Navy basic trainees are required to aid in clarifying the need for and the scope and specificity of intervention programs.

Objective. The primary goal of this study was to survey a large sample of U.S. Navy basic trainees for their pre-enlistment histories of adult sexual assault. The main objective of this study was to establish base rates for adult sexual violence to guide the development of future studies and treatment, prevention, and education programs.

Approach. Over a four-month period a sample of female ($n = 1,891$) and male ($n = 1,885$) U.S. Navy basic trainees at NTC Orlando, Florida was administered an instrument designed to assess experiences of sexual assault. Sexual assault was defined as the occurrence of at least one instance, since the age of 14, of a behavior that is legally defined as rape. Female trainees were only asked about sexual assault victimization and male trainees were only asked about perpetration of sexual assault.

Results. About 45.5% of the women reported they had been the victim of attempted (9.4%) or completed rape (36.1%) since the age of 14. Male trainees' self-reports of the perpetration of sexual assault indicated that 14.8% admitted to a behavior legally defined as attempted (3.5%) or completed rape (11.3%) since the age of 14.

Conclusions. A relatively high number of women, as victims, and men, as perpetrators, in the present sample reported histories of sexual assault. Victims of abusive behavior are at high risk of incurring somatic and/or psychological problems that require treatment by health-care professionals. Male perpetrators of sexual assault are at high risk of repeating their behavior. The relatively high rates of basic trainees' histories of sexual assault suggest it may be cost-effective to establish treatment, education, and prevention programs at the basic training command.

INTRODUCTION

Navy recruits reporting for basic training bring with them individual health care needs, shaped by previous experience, that can have far-reaching effects during their military careers. The experience of sexual assault (attempted or completed rape) may negatively impact recruits' health, well-being, job performance, and could also have implications for the delivery of social and medical services.¹⁻⁴

Female victims of sexual assault request and require acute and chronic assault-related health care at a higher rate than do comparison groups of women who have not been assaulted.⁵⁻¹² Abused women have significantly more health risk behaviors and incidents of somatization than do non-abused women.¹³ Sexual victimization has been linked to chronic pelvic pain,¹⁴ gastrointestinal distress, chronic headache, morbid obesity,^{15,16} physical injury, Post-traumatic Stress Disorder (PTSD), depression, suicidal ideation, suicide attempts, and alcohol and drug misuse.¹¹ Further, women with a history of abuse are at a higher risk for reporting somatic and psychological symptoms and lifetime surgeries regardless of their diagnosis;¹⁵ women who have been sexually victimized more than once are more likely to, aside from their victimization, have multiple sex partners, brief sexual relationships, unintended pregnancies,¹⁷ and are at an increased risk of contracting sexually transmitted diseases (STDs).¹⁸⁻²⁰

A study of a nationally representative sample of 3,187 college women found that 12.1% reported attempted rape and 15.8% reported being raped by a man.²¹ A recent review of studies that did not use nationally representative samples reported victimization estimates that ranged from 5% to 30% for the prevalence of rape among adult women of all ages.²² Furthermore, more than 80% of the women who are raped are assaulted before their 24th birthday.¹¹ Therefore, it is reasonable to conclude that a considerable number of young women probably enter military service with histories of being victims of sexual assault.

Only one national study of male perpetrated sexual assault against women has been completed.²¹ In this study a nationally representative sample of 2,972 college men were surveyed and 3.2% reported attempting to rape and 4.6% reported raping at least one woman. A survey of 294 male college students at a "large, southwestern, public university" found that 7.1% of the men reported engaging in a behavior defined as rape.²³ The results of these studies suggest that

it would be logical to hypothesize that a substantial number of young men enter military service with histories of perpetrating sexual assault against women.

The primary goal of this study was to survey U.S. Navy basic trainees for their pre-enlistment histories of adult sexual assault. Sexual assault rates have been found to vary by demographic variables,²¹ therefore, the relationship between sexual assault prevalence rates and ethnicity, education, family income, and geographic region were examined in the present study. The present study was limited to the collection of data concerning female victims and male perpetrators because of the extremely low base rate of reported male victims and because the definition of rape that is used in most studies does not include male victims.²¹

METHOD

Participants

Navy basic trainees (1,832 women and 1,754 men) at the Recruit Training Command (RTC), Orlando, Florida, voluntarily completed the survey. About 92.5% of the male trainees and 89.9% of the female trainees who entered basic training completed the survey. Female trainees had a mean age of 20.45 years ($SD = 2.85$) with a range from 17 to 34 years and male trainees had a mean age of 20.15 years ($SD = 2.29$) with a range from 17 to 34 years. Most of the male (96.2%) and female (95.6%) trainees had a minimum of a high school education, 34.8% attended college, 10.2% were ever married (married, divorced, or separated) and 59.5% reported a family income of more than \$25,000 per year. Geographically, 42.2% of the total sample was from the South, 21.0% from the Midwest, 20.8% from the West, and 16.1% from the Northeast. The total sample was composed of 67.3% whites, 19.1% African-Americans, 7.6% Hispanics, 2.7% Asians, 1.5% American Indians, and 1.8% "others."

Materials

Five items from a female version of the Sexual Experiences Survey (SES) that ask about attempted rape and rape since the female participant's 14th birthday were used to determine the prevalence of sexual assault victimization.¹⁰ SES internal stability (alpha) for the 5-items of the SES have not been reported, however, the alpha for the 11-item SES is .74.²⁴ The alpha for the SES in the present study was .64. The 5 items were: (1) Has a man made you have sex by using force or threatening to harm you? When we use the word "sex" we mean a man putting

his penis in your vagina even if he didn't ejaculate (come). (2) Has a man made you have sex by getting you high or drunk? (3) Has a man TRIED to get sex by using force or threatening to harm you, but HE DID NOT SUCCEED? (4) If he did not try to put his penis in your vagina, has a man made you do other sexual things like oral sex, anal sex, or put fingers or objects inside of you by using force or threatening to harm you? (5) If he did not try to put his penis in your vagina, has a man TRIED to threaten you or use force to make you do other sexual things like oral sex, anal sex, or put fingers or objects inside of you but he DID NOT succeed?

Six items from a male version of the SES that ask about attempted rape and rape were used to assess the prevalence of males' perpetration of sexual assault since their 14th birthday. The alpha for the full 11 item SES is .89.^{24,25} In the present study the alpha for the male version was .88. Male participants were asked to indicate if they had (1) Attempted sexual intercourse with a woman when she didn't want to by giving her more alcohol or drugs than she could handle. (2) Attempted sexual intercourse with a woman by threatening to use force. (3) Attempted sexual intercourse with a woman by using some degree of force. (4) Had sexual intercourse with a woman when she didn't want to by giving her more alcohol or drugs than she could handle. (5) Had sexual intercourse with a woman when she didn't want to by threatening to use force. (6) Had sexual intercourse with a woman when she didn't want to by using some degree of force.

Simply totaling the number of trainees who reported each individual behavior would have produced an inflated estimate of the total number of trainees with histories of sexual assault because some trainees reported more than one of the behaviors. Therefore, trainees were classified based on the most severe sexual experience they reported.²¹

The attempted rape and rape items in the SES describe experiences which meet legal definitions of rape. Legally, rape in many states is defined as acts of nonconsensual attempted or actual penetration obtained by physical force, by threat of bodily harm, or when the victim is incapable of giving consent by virtue of intoxication.^{21,27} Attempted and completed rape were operationally defined as having occurred when respondents (women, victims; men, perpetrators) marked one or more of the SES attempted or completed rape items.

Procedure

The questionnaires were administered as part of a more extensive survey package offered to Navy basic trainees during their first week at the RTC. Data collection began in January and was completed in April 1994. In the process of requesting that trainees participate in the study, a corpsman gave and read to the trainees a description of the study, the informed consent, and privacy act statements. Trainees who agreed to participate were told they could "leave blank any section or questions that you do not want to answer," that they were "free to stop at any time before completing the survey," and that professional counseling would be provided upon request if the recall of past traumatic experiences caused them distress.

The relationship between sexual assault and demographic variables were examined using chi-square analyses. These analyses may yield significant differences when used with large sample sizes; therefore, a conservative significance level of .01 was used. For significant findings, effect sizes (w for chi-squares) were calculated using a method that allows for a determination of their practical value.²⁶ With this method w 's of .10, .30, and .50 signify small, medium and large effects, respectively. Respondents were placed in one of three categories (less than a high school education, high school education or GED, and some college education) to evaluate the impact of education. For the variable of geographic region, respondents were placed in one of the four geographic census regions of Northeast, Midwest, South, or West.²⁸

RESULTS

Female Sexual Victimization Since Age 14

Female trainees' sexual victimization rates since age 14 are presented in Table 1. Overall, 45.5% of the female trainees reported being the victim of sexual assault. Of the 834 women who reported being sexually assaulted, 65.6% ($n = 547$) exclusively reported the use of force or the threat of force; 17.9% ($n = 149$) exclusively reported the use of alcohol or drugs; and 16.5% ($n = 138$) reported both the threat of or use of force and the use of alcohol or drugs.

Table 1

Prevalence Rates for Premilitary Sexual Victimization and Aggression

<i>Experience*</i>	<i>Women (n = 1,832)</i>		<i>Men (n = 1,754)</i>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
Attempted rape	173	9.4	62	3.5
Rape	661	36.1	198	11.3
Total	834	45.5	260	14.8

*Female victims and male perpetrators.

Chi-square tests revealed a significant, but small effect for sexual assault rates by ethnicity, $\chi^2(5, n = 1,820) = 23.82, p = .001, w = .12$. The highest percentage of sexual assault was reported by white/non-Hispanic women (49.7%, $n = 1,162$), whereas the lowest rate was reported by Asian women (32.6%, $n = 46$). Additionally, sexual assault was reported by 43.8% ($n = 32$) of the American Indian women, 42.9% ($n = 42$) of the women who indicated their ethnic background was "Other," 40.2% ($n = 132$) of the Hispanic women, and 37.4% ($n = 406$) of the African-American women. Sexual assault rates did not vary by reported parental income, $\chi^2(5, n = 1,801) = 11.23, p = .05$; by level of education, $\chi^2(2, n = 1,830) = 4.92, p = .09$, or by geographic region, $\chi^2(3, n = 1,700) = 4.36, p = .22$.

Male Sexual Aggression Since Age 14

Male trainees' rates of sexual aggression are presented in Table 1. Overall, 14.8% of the male trainees reported perpetrating a sexual assault. Of the 260 men who reported sexually assaulting a woman, 14.6% ($n = 38$) exclusively used force or the threat of force, 57.7% ($n = 150$) exclusively used alcohol or drugs; and 27.7% ($n = 72$) used both the threat of force or force and alcohol or drugs.

Chi-square analyses were used to determine the relationship between male sexual aggression and the demographic variables of ethnicity, reported parental income, education level, and geographic region. The prevalence of sexual aggression did not differ by ethnicity, $\chi^2(5, n = 1,753) = 6.00, p = .31$; parental income, $\chi^2(5, n = 1,733) = 12.71, p = .03$; level of education, $\chi^2(2, n = 1,750) = 1.96, p = .38$; or geographic area, $\chi^2(3, n = 1,662) = 1.82, p = .61$.

DISCUSSION

The primary goal of the study was to estimate base rates of pre-enlistment sexual assault experiences among a large sample of U.S. Navy basic trainees. About 45.5% of the women indicated they had been the victim of at least one behavior that is legally defined as rape (which includes attempted rape) while 14.8% of the men admitted to being the perpetrator of at least one behavior that is legally defined as rape. The relatively high levels of rape found in this study provides convincing evidence that a substantial number of basic trainees report histories of victimization and perpetration of adult sexual assault.

Data concerning independent confirmations of the sexual assault experiences reported by the trainees were not collected in this study. Therefore, a determination that the female trainees who self-reported experiences coded as rape were actually raped cannot be reached based on the results of this study. Neither can a determination be made that the male trainees categorized as self-reporting an act of rape actually committed rape. Both groups, however, reported behaviors that are legally defined as rape.^{21,28}

Prevalence estimates of rape and attempted rape vary as a function of the definitions and methodology employed, characteristics of the sample, and the social or sociocultural climate of the geographic area.^{21,29} Therefore, caution should be used whenever sexual assault rates are compared. Mindful of this caveat, a review of the sexual assault literature shows prevalence rates for female victims of completed rape of 26% for a small sample of 137 Louisiana high school students;³⁰ 15.1% for 368 nursing students in Baltimore, Maryland;³¹ 14.7% for 380 college introductory psychology students at a "large, southwestern, public university" and; 29% for 400 students at Rutgers University City, New Jersey.²³ The participants used in these samples were all in the same age range as the trainees in the present study.

As can be seen in Table 1, the rate for completed rape found in the present study (36.1%) was more than twice the rate found by Koss et al. (15.4%);²¹ however, the rate for attempted rape for the present study (9.4%) was less than that reported by Koss et al.²¹ (12.1%). Since these rates are mutually exclusive, it appears that the percentage of female rape victims in the trainee sample is considerably larger than that found by Koss and colleagues²¹ in a nationally representative sample of college students. Nevertheless, the estimate of attempted rape found in the present study may be conservative when compared to those of Koss et al.²¹ because Koss and

colleagues used an item that asked about attempted unwanted sexual intercourse through the use of alcohol or drugs that was not included in the present survey of female trainees. The comparison, however, of sexual assault rates from the present study with those of Koss et al.²¹ is valuable because they used a nationally representative sample, similar instrument, and the participants were in the same age range.

Koss et al.²¹ reported rates of sexual assault victimization of 40% ($n = 20$) for American Indian, 16% ($n = 2,655$) for White/non-Hispanic, 12% ($n = 106$) for Hispanic, 10% ($n = 215$) for African-American, and 7% ($n = 79$) for Asian women. Although a similar rate of sexual assault was found in the present study for American Indian women (43.8%), higher rates were found for white/nonHispanic women (49.7%), Hispanic women (40.2%), African-American women (37.4%), and Asian women (32.6%). Both the Koss et al.²¹ and the present study failed to find a difference in rates of sexual assault between reported levels of parental income. Koss et al.,²¹ unlike the present study, did report geographic regional differences with women in the "Great Lakes" and "Plains" states having higher rates.

A review of studies that have investigated sexual assault in community samples shows prevalence rates for female victims of completed rape of 13% for a national probability sample of 4,008 women;¹¹ 19% for a sample of 930 women living in San Francisco, California;³² 8.6% for a sample of 601 of women living in Charleston County, South Carolina³³ and; 22.2% for attempted or completed rape in a sample of 248 women living in Los Angeles, California.¹⁷

The foregoing overview of sexual assault prevalence rates, for students and community samples, shows that other studies have found rates for completed rape victimization that vary from 8.6% to 29%.^{11,29} No other study has reported a higher rate for completed rape victimization than the 36.1% found in the present study. However, many of the other studies found higher rates for attempted rape than the 9.4% found in the present study.^{21,32,34}

Previous studies indicate that sexual assault has major implications for the delivery of general medical and psychological health care services.⁸⁻¹⁰ Additionally, the long-term consequences of the sexual assault may have a significant impact on attrition, job performance, retention, and interpersonal behavior. For example, women with a history of sexual victimization require an increased amount of health care. Indeed, sexual victimization has been identified as one of the factors responsible for excessive health care costs in the United States.⁹ Victims often will not

volunteer information about abuse, and health-care providers often neglect to ask. Because of this, failure to accurately diagnose and treat victimization often perpetuates the problem and the impact on health-care requirements.¹⁰

In community samples, victimization has also been shown to have an acute and chronic negative impact on health.^{9,10} Further, stress may exacerbate the somatic and psychological consequences of victimization. For example, stress has also been shown to mediate the effects of trauma on the recurrence of somatic and psychological illnesses.³⁴ In addition, somatic and psychological trauma incurred through victimization may recur chronically.^{8,35,36} Therefore, it is reasonable to conclude that basic trainees with a history of victimization, all of whom will be exposed to numerous novel environmental, psychosocial, and job stressors, may have an increased need for unique medical and psychological services. Although stress may mediate some victimization-related somatic and psychological conditions, victimization appears to be the causal factor.³⁷

Although the rate for the perpetration of attempted rape among the male trainees (3.5%) is about the same as that among college men (3.3%) by Koss et al.,²¹ the rate for completed rape (11.3%) is more than twice that of the college men (4.6%). The rates found in male trainees, however, may be attenuated because an item that asked about unwanted penetration with objects other than the penis and oral and anal intercourse that was used by Koss et al.²¹ was not included in the present study. Regardless, the male trainees appear to have engaged in substantially more sexually aggressive behaviors that are legally defined as rape than did the male college students.

A history of sexual aggression has been shown to predict future aggression in nonmilitary samples.³⁸ The relatively high rates of male perpetration of sexual assault found among trainees indicate a need for early interventions to aid in preventing future aggression. Because only about 5% to 16% of rapes are reported to police, early identification and treatment of sexually aggressive men may be the most practical option for reducing recidivism.^{11,21,39} Without intervention, perpetrators of sexual aggression are at a high risk of repeating their behavior.⁴⁰

This study contained limitations that may have affected the results. The version of the SES used in the present study was used by Koss et al.⁹ in a 1991 study, however, in the 1987 study Koss et al.²¹ used a version of the SES that contained two items that were not used in the present study. The use of the 1991 version of the SES may have affected the reported prevalence rates.

Despite collecting data from a large sample of women and men, the results cannot be generalized to the population of military trainees or the population of U.S. Navy trainees. Trainees' may vary demographically, depending upon the time of the year they enter the military. For instance, a large number of trainees who have not attended college enter the military during the summer months, immediately after graduating from high school. Although the present study examined the effect of demographic variation on reported sexual assault rates of a sample of trainees from January through April, the effect of demographic variables on prevalence rates of samples collected at other times of the year has yet to be determined.

Longitudinal studies are needed to determine the effect of sexual assault histories on the health and functioning of military personnel. The literature, using nonmilitary samples, suggests that personnel with histories of victimization and perpetration of abusive behaviors serving in the Navy require more medical, psychological, and administrative services than personnel with no maltreatment histories. Therefore, comprehensive maltreatment histories are presently being collected, over a 12 month period of time, from large samples of female and male U.S. Navy basic trainees. All of the trainees are asked to voluntarily complete an initial survey and a subsample is asked to complete subsequent surveys 6, 12, and 24 months after the initial survey. The information gained in this study will be used to gauge the potential impact of maltreatment histories on military readiness and to aid in the development of sexual assault treatment and education programs.

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13. ABSTRACT (Maximum 200 words) U.S. Navy recruits ($n = 3,776$) were surveyed for premilitary histories of adult sexual assault. They were administered an instrument designed to estimate rates for experiences as victims (women) and perpetrators (men) of attempted and completed rape, since the age of 14. The results show that 45.5% of the women reported being the victim of attempted (9.4%) or completed rape (36.1%) prior to entering the Navy. A high percentage of recruits in this study reported histories of sexual assault. Female victims of sexual assault are at high risk incurring somatic and/or psychological problems that require treatment by health-care professionals. Male perpetrators of sexual assault are at high risk of repeating their behavior. The results of this study suggest it may be cost-effective to develop treatment, education, and prevention programs for military recruits.				
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